

Work Order ID 77451

77451

Page 1

December-07-11 11:07:06 AM

Item ID: D205-634-041

Accept

N900040100

Setup Start *NS1*

Revision ID:

Stop *NS2*

Item Name: Replacement Skidtube

Start Date: 07/12/2011 Start Qty: 1.00

1

Cust Item ID:

Required Date: 23/12/2011 Req'd Qty: 1.00

1

Customer:

Reference:

Approvals:

Process Plan: M.L.J.

Date: 11/12/07 Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start *NR1*

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D2580-041	Rev.E

100

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy D205-634 bluefile & type labels per PPP D205-634-041 CHG002

8-11/2/08

MLJ 11-12-28
①

110

0.00

110

BENDING MACHINE - SKIDTUBES

CNC Bend 1

Memo

0.00

CNC Delta 100 Bender

1-Bend as per program D2580.C on CNC Bender and Folio 16

MO 11-12-14

2-Cut tubes as per Dwg. D2580

JW 11-12-14

3- scribe batch# in aft end of tube

MO 11-12-14

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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Run Start ***NR1***

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Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120		0.00							
120									
Skidtubes	Memo	0.00							
Skidtubes	1- Deburr ends and remove bending marks								
	2- Prepare tube for welding as per QSI 004								
130	QC5- Inspect part completeness to step on W/O	0.00							
130									
QC	Memo	0.00							
Quality Control									

~~BB~~ 11/12/15

Ph →

8-11/21/15

Dart Aerospace Ltd

W/O: 77451		77451 WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D205-634-041 PAR #: Fault Category: Landing gear NCR: Yes No DQA: Date: 12/1/11
11-1095 Resolution: Disposition: 6/15 tubes QA: N/C Closed Date: 12/1/11

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
11/12/19	#100	Found at inspection that the Aft Bend height = 1.800". should be 1.400" ± .100"	UP 11.12.19 PS/042	Acceptable.	n/a	S 11/12/19	UP 11.12.19 PS/042	S 11/12/19

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Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

140

0.00

140

Skidtubes

Skidtubes

Memo

0.00

1-Weld step D2576 as per Dwg. D2580 and OSI 004
A/R Aluminum Rod ~~M117889~~ M119712

BE11-12-19

2-Grind welds on step as per Dwg D2580 ~~CK~~ 11-12-20

3-Weld spacers as per dwg D2580 A/R M119712

BE11-12-19

3- *** N/A**** Insert D4202-1 spacer, swage as per QSI002 and trim/ grind
flush per QSI002 and dwg. Hold x-bolt with DT9701 Use tube expander 1/2
x17G to start expansion and finish with 1/2 x 18G to achieve dwg dimension.4-Drill holes for wearplates using DT 8217 & DT8937 Open holes to 19/64",
adjust stopper not to hit web. Deburr> ~~CK~~

11-12-20

6-Drill pilot holes for aft cap using DT 8215 Open holes to 0.208". Deburr

7-Drill pilot holes for Tow ring using DT8091, open to .640" and Deburr

> DP

11-12-21

J C - Boe

W/O:		WORK ORDER CHANGES					
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Run Start ***NR1***

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Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
150	QC10- Inspect visual per QSI004- ground welds	0.00							
150									
QC	Memo	0.00							
Quality Control									
160	QC5- Inspect part completeness to step on W/O	0.00							
160									
QC	Memo	0.00							
Quality Control									
170	Pressure Wash per QSI005 4.3	0.00							
170									
HandFinish	Memo	0.00							
Hand Finishing	Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch and leave fwd cap out of solution.								

1X Ø M / 11/12/22

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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*** 1 ***

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Required Date: 23/12/2011 **Req'd Qty:** 1.00

*** 1 ***

Customer:

Reference:

Run Start *NR1*

Approvals: **Process Plan:** _____ **Date:** _____ **Tooling:** _____ **Date:** _____

Stop ***NR2***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center ID

Operation Description

Set Up/ Run Hours

Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
---------	--------	-----------	------------	------------	---------------	-------------

180

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00

180

Powdercoat

Powder Coating

Memo

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

0.00

0.00

190

QC3- Inspect Part Finish

190

QC

Quality Control

Memo

0.00

IX Jm - 11/12/22

1 BR 11-12-22

W/O:		WORK ORDER CHANGES					
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Run Start ***NR1***

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Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
200		0.00							
200						<u>1</u>	<u>162</u>	<u>11-12-23</u>	
HandFinish	Memo	0.00							
Hand Finishing	1-Install inserts & wearplates & Gaskets as per Dwg. D2580. Use a drop of Sikaflex on insert holes before installing wearplates A/R Sikaflex-291 <u>119443</u> Sikaflex expire date: <u>12/1</u>								
	2-Coat D2594-3 O' rings with Petroleum Jelly and install on D2594-1 plugs as per Dwg D2580								
	3-Inspect for foreign object per QSI 024								
	4-Install 2855 Aft Cap as per Dwg D2580 and seal Fwd Step & Aft Cap with Sikaflex. Clean excess adhesive A/R Sikaflex-291 <u>119443</u> Sikaflex expire date: <u>12/1</u>								
	5-Wing Walk as per Dwg D2580 and QSI 005 4.4 Batch: <u>119094</u>								

Dart Aerospace Ltd

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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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Required Date: 23/12/2011 Req'd Qty: 1.00

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Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
210	QC5- Inspect part completeness to step on W/O	0.00							
210									
QC	Memo	0.00							
Quality Control	Inspect Aft Cap, Fwd Step and Wing Walk of work to Current Step Inspect for Foreign objects per QSI 024								
220	Packaging	0.00							
220									
Packaging	Memo	0.00							
Packaging	Identify and pack for shipping as per PPPD205-634-041								
	Location: _____								
	PPP Rev: <u> L </u>								
230	QC21- Final Inspection - Work Order Release	0.00							
230									
QC	Memo	0.00							
Quality Control									

S u 11/12/23

11/12/28

11/12/28

11/12/28

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

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NOTE: Date & initial all entries

Picklist Print

December-07-11 11:07:09 AM

Page 1

Work Order ID: 77451

77451

Parent Item: D205-634-041

D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 07/12/2011

Required Date: 23/12/2011

Start Qty: 1.00

Required Qty: 1.00

Comments:

IPP Rev:N 02.08.28 FP was QC5 in Step 27; Added QC5 to Step 30
 KJ IPP Rev P 10.02.19
 per PAR09-043 EC verified by:DD
 IPP Rev. O 06.02.28 Added paperwork EC
 IPP Rev:P 07-07-09 SS Wearplates & Gaskets JLM IPP Rev:Q
 10.12.01 as per chg003 DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D4202-1	<i>D2579</i>	Manufactured	No			140	Each	542.0000	20	20			

D4202-1

Spacer

BE11-12-19
B77672 x20

Location	Loc Qty	Loc Code
LG	50	
67129	0	
74651	50	
LG002	492	
66929	106	
67129	196	
67308	1	
67430	140	
72639	49	

D2580-1

Manufactured No

110

Each

7.0000

1

1

D2580-1

205 Skidtube bent detail

Location	Loc Qty	Loc Code
LG	7	
72965	1	
76174	2	
76175	2	
76570	2	

①

MO 11-12-14

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval. Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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December-07-11 11:07:09 AM

Work Order ID: 77451

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Parent Item: D205-634-041

D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 07/12/2011

Required Date: 23/12/2011

Start Qty: 1.00

Required Qty: 1.00

D2576-3 Manufactured No

140

Each

95.0000

1

1

D2576-3

Step (maching detail)

**

BE 11-12-19

Location

Loc Qty

Loc Code

LG

95

70883

45

74136

50

D2855 Manufactured No

200

Each

46.0000

1

1

D2855

Cap

**

BL 11-12-23.

Location

Loc Qty

Loc Code

FP002

46

65519

2

73347 ✓

44

AN3-5A Purchased No

200

Each

868.0000

2

2

AN3-5A

Bolt

**

BL 11-12-23.

Location

Loc Qty

Loc Code

ST350

868

115371

46

117423 ✓

322

118626

300

119355

200

AN960JD10L *✓* NAS1149D0332J *✓* Purchased

No

200

Each

0.0000

2

2

***AN960JD10I ***

Washer

**

118389

2

BL 11-12-23.

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

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Parent Item: D205-634-041

D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 07/12/2011

Required Date: 23/12/2011

Start Qty: 1.00

Required Qty: 1.00

ALS7-1032-130

Purchased

No

200

Each

1,497.000

50

50

AI S7-1032-130

Insert

**

BL 11-12-23.

Location

Loc Qty

Loc Code

ST280

342

117717

27

118966

36

119775

279

ST281

221

119794

221

ST282

934

119530 ✓

934

50.

AN3C4A

Purchased

No

200

Each

2,272.000

50

50

AN3C4A

BOLT

**

BL 11-12-23.

Location

Loc Qty

Loc Code

ST350

2272

117313

2

117688

5

117872

10

118112

16

118451

2

118838 ✓

826

119328

411

119749

1000

50.

AN960C10L

✗ NAS1149C0332 ✓
R

Purchased

No

200

Each

0.0000

50

50

*AN960C10I *

washer

**

50.

BL 11-12-23.

119736.

W/O:		WORK ORDER CHANGES					
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D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 07/12/2011

Required Date: 23/12/2011

Start Qty: 1.00

Required Qty: 1.00

D3566-13

Manufactured No

200

Each

77.0000

1

1

D3566-13

Gasket

**

BL 11-12-23.

Location

Loc Qty

Loc Code

FP002

16

73322 ✓

16

FP-002

60

76947

60

FP014

1

68341

1

D3566-5

Manufactured No

200

Each

51.0000

1

1

D3566-5

Gasket

**

BL 11-12-23.

Location

Loc Qty

Loc Code

FP002

51

~~76947~~ ✓

18

75069

33

76945

D3566-1

Manufactured No

200

Each

59.0000

2

2

D3566-1

Gasket

**

BL 11-12-23.

Location

Loc Qty

Loc Code

FP002

57

74518

5

76941

26

76942 ✓

26

FP015

2

68924

2

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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D205-634-041

Parent Item Name: Replacement Skidtube

Start Date: 07/12/2011

Required Date: 23/12/2011

Start Qty: 1.00

Required Qty: 1.00

D3564-11 Manufactured No

200 Each 9.0000 1 1

D3564-11

Wearshoe

**

BR 11-12-23

Location

Loc Qty

Loc Code

FP001

9

74705 ✓

9

D3564-13 Manufactured No

200 Each 23.0000 1 1

D3564-13

Wearshoe

**

BR 11-12-23

Location

Loc Qty

Loc Code

FP001

23

71594

1

73323

3

75045 ✓

19

D3564-9 Manufactured No

200 Each 18.0000 1 1

D3564-9

Wearshoe

**

BR 11-12-23

Location

Loc Qty

Loc Code

FP001

18

67590

4

69943

1

75071 ✓

13

Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
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Start Date: 07/12/2011

Required Date: 23/12/2011

Start Qty: 1.00

Required Qty: 1.00

D3564-5

Manufactured No

200

Each

32.0000

1

1

D3564-5

Wearshoe

**

BL 11-12-23

Location

Loc Qty

Loc Code

FG

76944

2

34806

2

FP001

30

73330

1

74543

7

76269

22

D2594-3

Manufactured No

200

Each

528.0000

16

16

D2594-3

O-Ring, 205 Skidtube

**

BL 11-12-23

Location

Loc Qty

Loc Code

FP001

528

65518

41

73490 ✓

487

D2594-1

Manufactured No

200

Each

544.0000

16

16

D2594-1

Plug, 205 Skidtube

**

BL 11-12-23

Location

Loc Qty

Loc Code

FP001

544

73401

30

74442

114

74869

200

76075 ✓

200

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

LIST OF MATERIALS					
ITEM	QTY -041	QTY -045	QTY -047	PART NUMBER	DESCRIPTION
1	X			D2580-041	SKIDTUBE ASSEMBLY
2		X		D2580-045	SKIDTUBE ASSEMBLY
3			X	D2580-047	SKIDTUBE ASSEMBLY
4	1	1	1	D2500-1-190	EXTRUSION
5			16	D2570	BUSHING
6	1	1	1	D2576-3	STEP
7	20	24	25	D2579	SPACER
8	16	16	8	D2594-1	PLUG
9	16	16	8	D2594-3	O-RING
10	1	1	1	D2596	205 WEB
11	1	1	1	D2855	AFT CAP
12	1	1		D3564-5	WEARSHOE
13	1	1		D3564-9	WEARSHOE
14	1	1		D3564-11	WEARSHOE
15	1	1		D3564-13	WEARSHOE
16	2	2		D3566-1	GASKET
17	1	1		D3566-5	GASKET
18	1	1		D3566-13	GASKET
19			1	D4406-041	WEARPLATE ASSEMBLY
20			1	D4406-043	WEARPLATE ASSEMBLY
21	50	50		ALS7-1032-130 or AKS7-1032-130 or AKS4-1032-130 or AELS-1032-130	INSERT
22	50	50		AN3C4A	BOLT
23	2	2	2	AN3-5A	BOLT
24			8	AN4-45A	BOLT
25	50	50		NAS1149C0332R	WASHER (AN960C10L)
26	2	2	2	NAS1149D0332J	WASHER (AN960JD10L)
27			8	MS21042-4	NUT (OR MS21042L4)

GENERAL NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: CHEMICAL CONVERSION PER DART QSI 005 4.1 PRIOR TO INSERTING D2596 WEB
POWDER COAT ASSEMBLY (-041/-047) GLOSS WHITE (REF 4.3.5.1) PER DART QSI 005 4.3
POWDER COAT ASSEMBLY (-045) GREEN SANDEX (REF 4.3.5.8) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT AS INDICATED PER DART QSI 005 4.4.
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: D2580-041 = 34.5 lbs
D2580-045 = 34.5 lbs
D2580-047 = 37.7 lbs
- 8) WELDING PER DART QSI 004.
- 9) INSERT D2596 WEB TO LOCATION SHOWN OFF AFT END OF SKIDTUBE AND BOND WEB INTO OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241 ADHESIVE PER DART QSI 015 BEFORE BENDING. ENSURE HOLES LINE-UP.
- 10) BEND AS A SMOOTH RADIUS STARTING WITH A MAXIMUM CENTERLINE RADIUS OF 60 AND ENDING WITH A MINIMUM RADIUS OF 30. A MAXIMUM REDUCTION OF 0.200 IN DIAMETER IS ALLOWABLE IN THE BENT PORTION OF THE TUBE.
- 11) USE DART DRILL TEMPLATE DT8217 & DT8937 ONLY FOR D2580-041/-045 TO LOCATE AND DRILL Ø0.297 HOLES FOR WEARSHOE INSERTS. INSTALL ALS7-1032-130 PER SECTIONS B-B AND F-F (50 PLACES) AFTER FINISH. INSTALL AN3C4A BOLTS AND NAS1149C0332R WASHERS WITH SIKAFLEX-241/-291.
- 12) INSERT D2594-1 PLUG C/W D2594-3 O-RING IN HOLES MARKED 'P' (BOTH SIDES OF TUBE) AFTER FINISH (16 PLACES FOR D2580-041/-045 AND 8 PLACES FOR D2580-047)
- 13) IT IS ACCEPTABLE TO GRIND A RELIEF IN THE D2855 AFT CAP TO PREVENT INTERFERENCE WITH THE SPACER AT THIS LOCATION

RELEASED
2011-08-29
WD

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED
SUBJECT TO AMEND
WITHOUT NOT
WORK ORDER
77457 H.C.J
11/12/07

E	ADD D2580-047 (ZN C4-7) AND D2580-7 (ZN B3-8); INCLUDED DEO D2580-D-1; REFORMATTED DRAWING TO CURRENT STANDARDS; DT8217 & DT8937 WAS TD2577-205 (ZN C4-1)	RF	11.06.21
D	CHANGE TO SS WEARPLATES AND GASKETS, INCLUDE DEO 9124/ 9183	PH	07.04.05
C	REDRAWN, INCLUDED DEO 9094/ 9097	CP	98.08.26
B	AS MANUFACTURED	DS	96.12.02
A	NEW ISSUE	DS	96.09.16
REV.	DESCRIPTION	BY	DATE
DESIGN	#	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	10	DRAWING NO.	REV. E
MFG. APPR.	10	D2580	SHEET 1 OF 8
APPROVED	10	TITLE	SCALE
DE APPR.	10	205 SKIDTUBE ASSEMBLY	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

8 7 6 5 4 3 2 1



1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (20 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP



DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

DRAWING NO.	REV. E
D2580	SHEET 2 OF 8

TITLE	SCALE
205 SKIDTUBE ASSEMBLY	NTS

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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

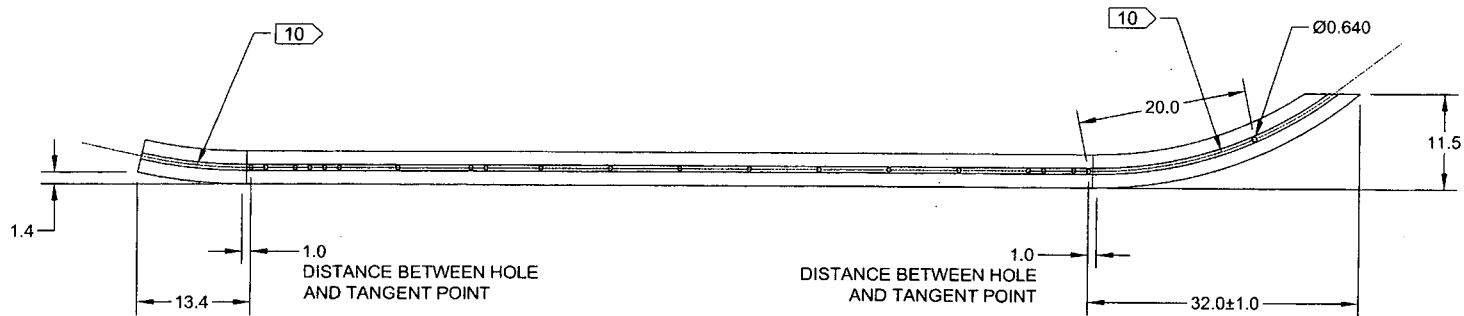
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Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

7745



D2580-1 BENT TUBE
(MAKE FROM D2580-101 TUBE)

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2011-08-28
WV

DESIGN	#	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	10	DRAWING NO.	REV. E
MFG. APPR.	10	D2580	SHEET 3 OF 8
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

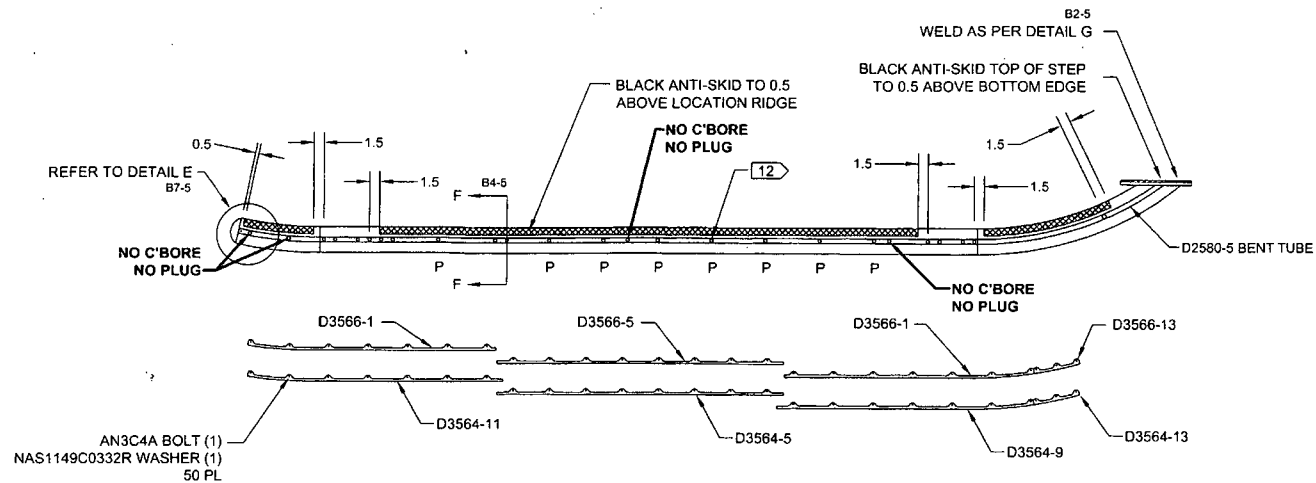
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

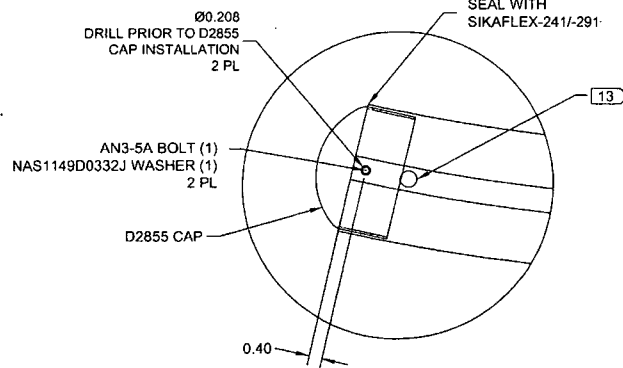
NOTE: Date & initial all entries

77451

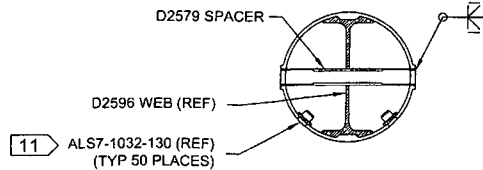


D2580-045 ASSEMBLY DETAIL

DETAIL E D7-5
SCALE 5X

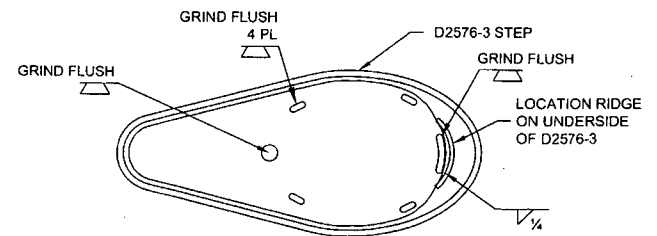


SECTION F-F D5-5
SCALE 5X



AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:
1. CHAMFER HOLE 0.050 X 45°
2. INSERT D2579 SPACER (24 PLACES)
3. WELD INTO PLACE AND GRIND FLUSH
4. C'BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP

DETAIL G D3-5
SCALE 5X



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DESIGN	#	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	AP	DRAWING NO.	REV. E
MFG. APPR.	AP	D2580	SHEET 4 OF 8
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DE APPR.	AP	205 SKIDTUBE ASSEMBLY	NTS
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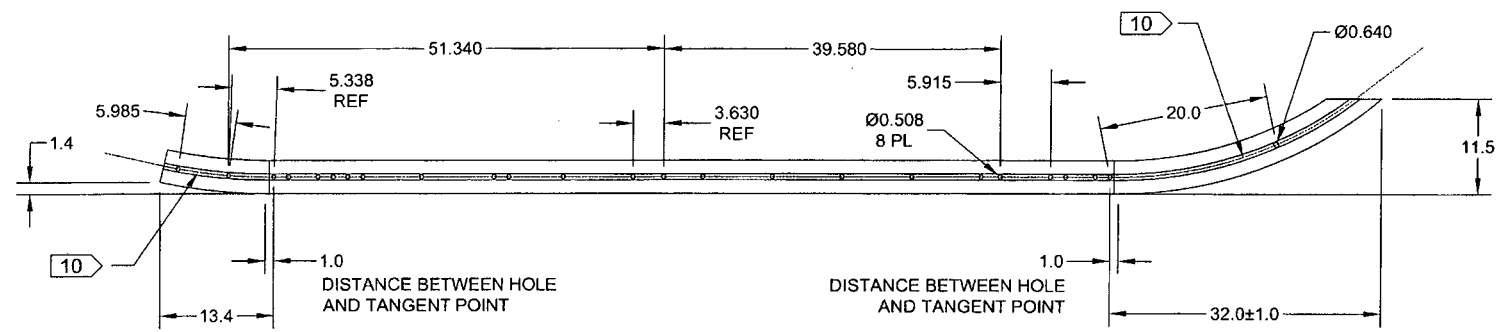
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ **PAR #:** _____ **Fault Category:** _____ **NCR: Yes No** **DQA:** _____ **Date:** _____
Resolution: _____ **Disposition:** _____ **QA: N/C Closed:** _____ **Date:** _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

77451



D2580-5 BENT TUBE
(MAKE FROM D2580-101 TUBE)

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2011-08-29

DESIGN	#	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	AP	DRAWING NO.	REV. E
MFG. APPR.	AS	D2580	SHEET 5 OF 8
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

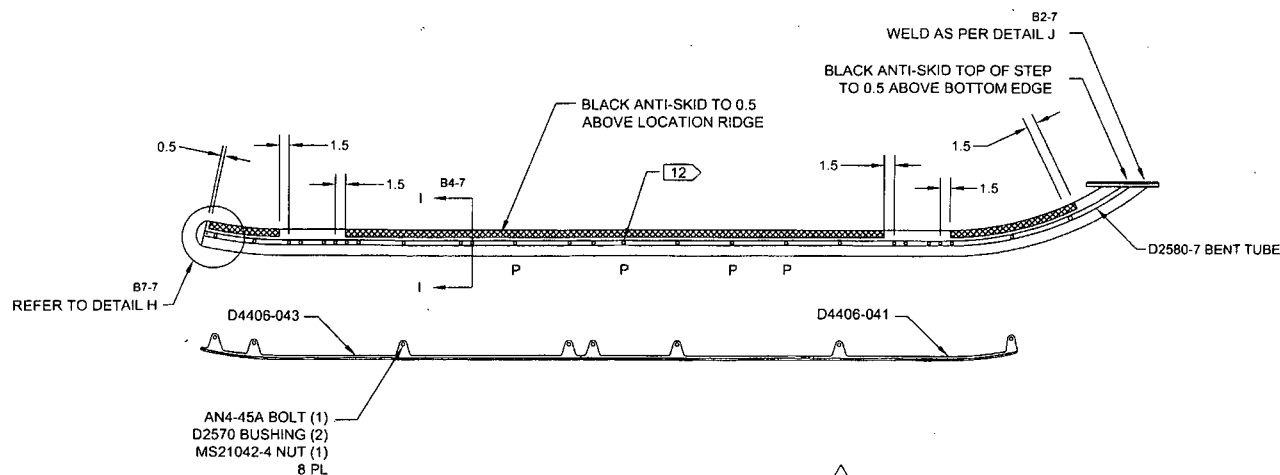
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

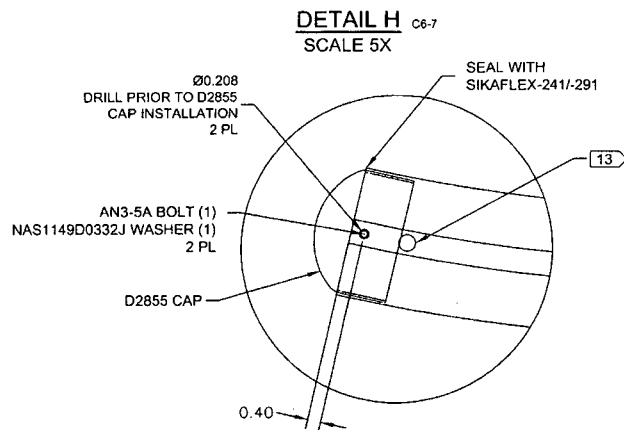
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

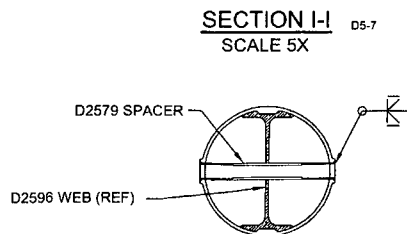
77451



D2580-047 ASSEMBLY DETAIL E

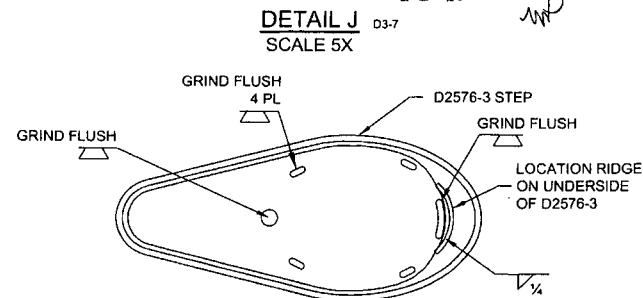


DETAIL H C6-7
SCALE 5X



SECTION I-I D5-7
SCALE 5X

- AFTER DRILLING AND BENDING ASSEMBLY
PERFORM THE FOLLOWING FOR Ø0.508 HOLES ONLY:
1. CHAMFER HOLE 0.050 X 45°
 2. INSERT D2579 SPACER (25 PLACES)
 3. WELD INTO PLACE AND GRIND FLUSH
 4. C/BORE D2579 SPACER TO Ø0.437 X 1.00 DEEP



DETAIL J D3-7
SCALE 5X

DESIGN	#	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	10	DRAWING NO.	REV. E
MFG. APPR.	10	D2580	SHEET 6 OF 8
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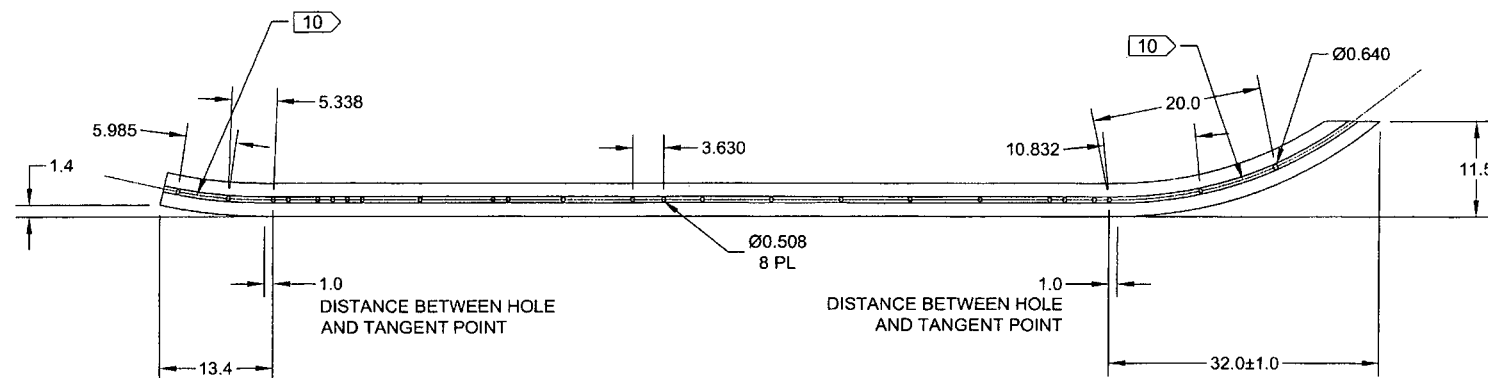
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____
 Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

77457



D2580-7 BENT TUBE
(MAKE FROM D2580-101 TUBE)

E

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2011-08-29
ANP

DESIGN	#	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	10	DRAWING NO.	REV. E
MFG. APPR.	10	D2580	SHEET 7 OF 8
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

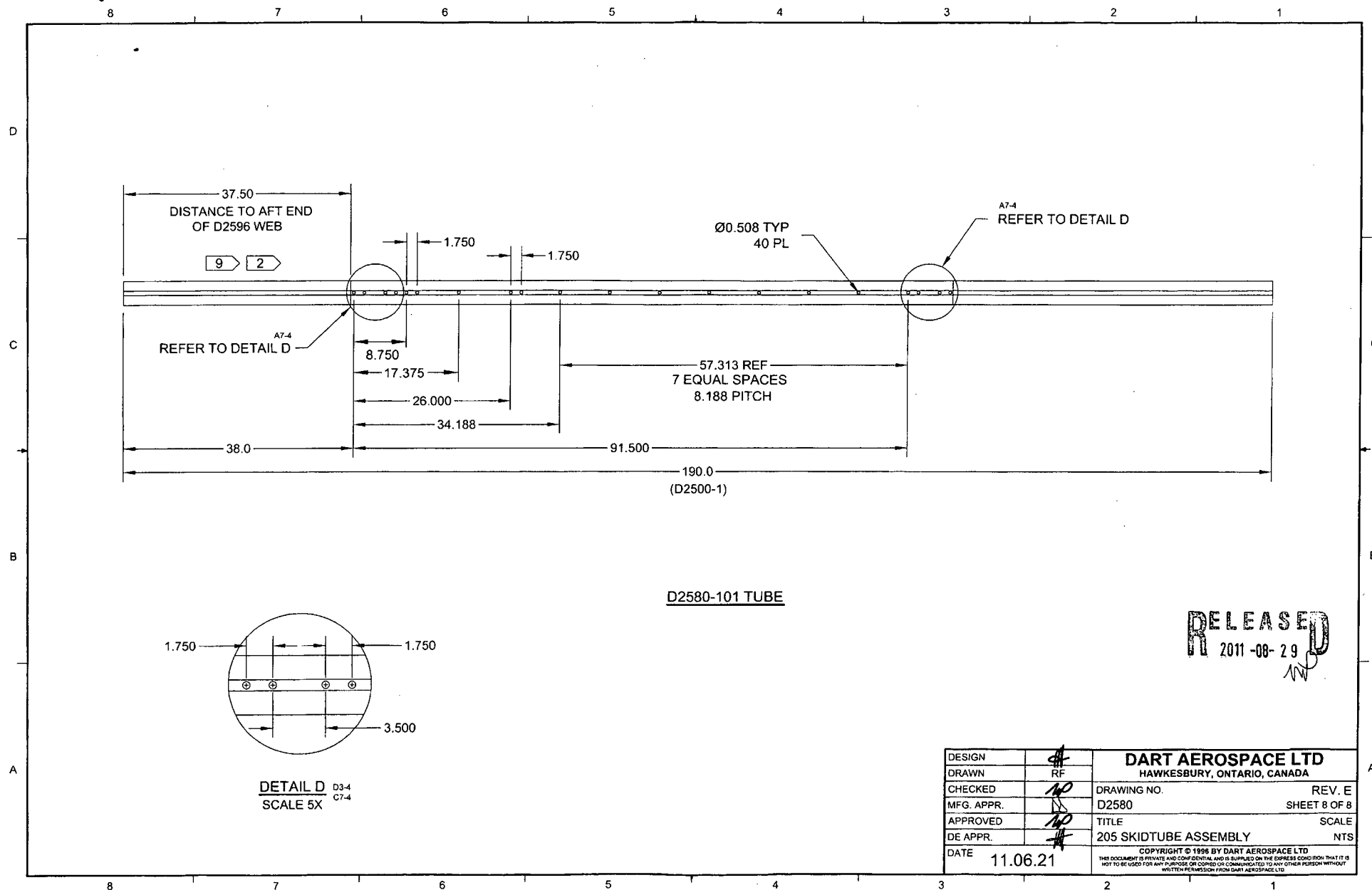
Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

NO. 275

AWS D17.1.2001
QUALIFICATION TEST RECORD

Name: Barclay Elliot
Job number: 76550
Part number: 205-634-041
Description: Skid Tube
Welding Process: Tig[☒] Mig[]
Base material: Alum
Current: AC[☒] DC[]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[]
Penetration: pass[☒] fail[]

UNACCEPTABLE

Cracks: pass[☒] fail[]
Undercut: pass[☒] fail[]
Pin holes: pass[☒] fail[]
Overlap (cold lap): pass[☒] fail[]
Porosity (surface): pass[☒] fail[]
Coloration: pass[☒] fail[]

Qualifier Sayed Samir Date of Test Coupon 11.11.22

Welder Barclay Elliot Date of Test Coupon 11.11.22

The above named individual is qualified in accordance with AWS D17.1.2001 to weld